Amendments to the Specification:

Please replace the paragraph, beginning at page 2, line 19, with the following rewritten paragraph:

When this type of gas sensor is used for detection of a hydrogen leak, a problem arises if moisture is contained in hydrogen as detection target gas.

Please replace the paragraph, beginning at page 3, line 4, with the following rewritten paragraph:

In order to overcome this problem, the conventional gas sensor described above varies current which flows in the heating element formed by the platinum thin-film resistor.

Please replace the paragraph, beginning at page 5, lines 1-8, with the following rewritten paragraph:

Thereafter, the arithmetic unit corrects the both-end voltages of the heating element ~~obtained~~ when current other than the lowest current ~~flow usingis~~ obtained. Both a zero-point fluctuation correcting equation and a sensitivity fluctuation correcting equation ~~obtained in advance based on~~ utilize the both-end voltage of the heating element. This occurs when the lowest current flows and ~~a known~~ concentration of the detection target gas is known, so as to obtain respective standardized output values.

Please replace the paragraph, beginning at page 12, line 2, with the following rewritten paragraph:

Nets 9 made of metal, such as stainless steel are secured to inner holes 5 and outer hole 7.

Please replace the paragraph, beginning at page 12, line 3, with the following rewritten paragraph:

Nets 9 made of metal such as stainless steel, are secured to inner holes 5 and outer hole 7.

Please replace the paragraph, beginning at page 12, line 8, with the following rewritten paragraph:

Heating body 11 is provided in the zigzag shape on the surface of concavity 13 which is formed into an extremely thin film having a thickness of approximately ~~10~~ ten micrometers by micromachining method.

Please replace the paragraph, beginning at page 12, lines 13 and 15, with the following rewritten paragraph:

A ~~not shown~~not shown insulating layer made of silica is provided on the lower surfaces of heating body 11 and lands 12. Also, a ~~not shown~~not shown protective layer made of silica is provided on the upper surface of heating body 11.

Please replace the paragraph, beginning at page 12, line 25, with the following rewritten paragraph:

~~Moist~~Moisture-resistant resin 21 is injected through an injection opening (not shown) formed on container lid 20 into the entire space between detection circuit 17 and container lid 20, and is then hardened therein.

Please replace the paragraph, beginning at page 13, line 4, with the following rewritten paragraph:

The space between container 18 and container lid 20 is caulked after ~~moist~~moisture-resistant resin 21 is injected to and hardened in the space.

Please replace the paragraph, beginning at page 14, line 7, with the following rewritten paragraph:

In the case of are forming type fuel cell system, hydrogen tank 51 is replaced with a reformer.

Please replace the paragraph, beginning at page 14, lines 11 and 16, with the following rewritten paragraph:

The gas sensors for detecting a hydrogen leak are disposed in the vicinities of hydrogen tank 51 and fuel cell 54, within the air discharge piping of fuel cell 54, and other positions, as shown by black circles in FIG. 4. When the gas sensors other than that positioned within the air discharge piping detect a hydrogen leak, fuel cell control circuit 57 closes cutoff valve 52 to stop hydrogen supply to fuel cell 54 and then actuates alarm 59 and ventilation fan 60.

Please replace the paragraph, beginning at page 14, line 15, with the following rewritten paragraph:

When the gas sensors other than ~~that~~ those positioned within the air discharge piping detect hydrogen leak, fuel cell control circuit 57 closes cutoff valve 52 to stop hydrogen supply to fuel cell 54 and then actuates alarm 59 and ventilation fan 60.

Please replace the paragraph, beginning at page 14, line 19, with the following rewritten paragraph:

When the concentration of hydrogen detected by the gas sensor, disposed within the air discharge piping exceeds a specified value (for example, 2%, which is half of 4% as the explosion limit of hydrogen to secure safety), fuel cell control circuit 57 operates air compressor 55 and increases the discharge airflow amount such that the concentration of hydrogen becomes lower.

Please replace the paragraph, beginning at page 14, line 20, with the following rewritten paragraph:

When the concentration of hydrogen detected by the gas sensor disposed within the air discharge piping, exceeds a specified value (for example, 2%, which is half of 4% as the explosion limit of hydrogen to secure safety), fuel cell control circuit 57 operates air compressor 55 and increases the discharge airflow amount such that the concentration of hydrogen becomes lower.

Please replace the paragraph, beginning at page 15, line 11, with the following rewritten paragraph:

Tank 106 has a dual structure constituted by outside tank 107 and inside tank 108 so as to secure safety preventing a hydrogen leak especially at the time of collision.

Please replace the paragraph, beginning at page 15, line 12, with the following rewritten paragraph:

Tank 106 has a dual structure constituted by outside tank 107 and inside tank 108 so as to secure safety preventing hydrogen leak, especially at the time of collision.

Please replace the paragraph, beginning at page 16, line 9, with the following rewritten paragraph:

Additionally, a ~~not shown~~not shown gas sensor is provided within the air discharge piping of fuel cell 110 similarly to the case shown in FIG. 4.

Please replace the paragraph, beginning at page 16, line 12, with the following rewritten paragraph:

When any of these gas sensors detects a hydrogen leak, fuel cell control circuit 57 cuts off the supply source of hydrogen and stops supply of hydrogen to the fuel cell in the same manner as the case explained with reference to FIG. 4.

Please replace the paragraph, beginning at page 17, line 17, with the following rewritten paragraph:

In this embodiment, the initial current value (first value) is 1 mA or smaller, the second current value (second value) is 7 mA, and the third current value (third value) is 7.5 mA, where current flows for 0.1 second at each level.

Please replace the paragraph, beginning at page 17, line 22, with the following rewritten paragraph:

After current flow at the third level is finished, arithmetic unit 27 stops current supply to heating element 1 and ~~wait~~ waits for 1.7 second.

Please replace the paragraph, beginning at page 17, line 24, with the following rewritten paragraph:

One cycle of this current control is repeated at intervals of ~~2~~ two seconds.

Please replace the paragraph, beginning at page 18, line 15, with the following rewritten paragraph:

In this condition, since heating element 1 corresponds to a platinum temperature sensing element, the T value ~~indicating the~~representing both-end voltage of heating element 1 shows approximately the ambient temperature of heating element 1 only.

Please replace the paragraph, beginning at page 20, line 2, with the following rewritten paragraph:

Accordingly, the following calculations are executed to output both ~~the~~ levels.

Please replace the paragraph, beginning at page 24, line 8, with the following rewritten paragraph:

However, when the thermal conductivity of gas mixture, such as moist air is calculated using Sutherland-Wassiljewa type theoretical equation, the thermal conductivity varies as the temperature changes even in gas mixture having the same concentration.

Please replace the paragraph, beginning at page 24, line 9, with the following rewritten paragraph:

However, when the thermal conductivity of gas mixture such as moist air, is calculated using Sutherland-Wassiljewa type theoretical equation, the thermal conductivity varies as the temperature changes even in gas mixture having the same concentration.